

ABSTRACT OF THE DISCLOSURE

5 A diffractive optical element having a design wavelength λ , includes a diffractive surface for diffracting predetermined light corresponding to the design wavelength, and a mark shaped so that, with regard to the predetermined light, a phase difference corresponding to a multiple, by an integer, of the design wavelength λ is produced between (i) a light ray, of the predetermined light, as transmitted
10 through or reflected by the mark and (ii) a light ray, of the predetermined light, as transmitted through or reflected by a portion adjacent to the mark, and that, with regard to second light of a second wavelength λ' different from the design wavelength λ , no phase
15 difference corresponding to a multiple, by an integer, of the second wavelength λ' is produced between (a) a light ray, of the second light, as transmitted through or reflected by the mark and (b) a light ray, of the second light, as transmitted through or reflected by a
20 portion adjacent to the mark.